

2SB1183 / 2SB1239

- 1) Darlington connection for high DC current gain.
- 2) Built-in $4k\Omega$ resistor between base and emitter.
- 3) Complements the 2SD1759 / 2SD1861.

C : Collector
B : Base
E : Emitter

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CB0}	-40	V
Collector-emitter voltage		V_{CEr}	-40	V
Emitter-base voltage		V_{EB0}	-5	V
Collector current		I_c	-2	A(DC)
			-3	A(Pulse) *1
Collector power dissipation	2SB1183	P_c	1	W
			10	W(T(=25°C)
	2SB1239		1	W
Junction temperature		T_J	150	°C
Storage temperature		T_{stg}	-55~+150	°C

*1 Single pulse Pw=10ms
*2 Printed circuit board 1.7 mm thick, collector plating 100mm² or larger.

Technical drawing of a mechanical part with dimensions and tolerances. The drawing shows a side view of a component with a cylindrical section. Dimensions are given in millimeters (mm). Tolerances are indicated by numbers in parentheses.

Dimensions and Tolerances:

- Overall length: 9.5
- Distance from left face to start of cylindrical section: 1.0
- Distance from left face to center of cylindrical section: 0.5
- Distance from left face to end of cylindrical section: 0.8 Min
- Distance from left face to end of cylindrical section: 1.5
- Distance from left face to end of cylindrical section: 2.5
- Distance from left face to end of cylindrical section: 2.3
- Distance from left face to end of cylindrical section: 0.5
- Distance from left face to end of cylindrical section: 2.3
- Distance from left face to end of cylindrical section: 0.9
- Distance from left face to end of cylindrical section: 0.9
- Distance from left face to end of cylindrical section: 0.75
- Distance from left face to end of cylindrical section: 5.5
- Distance from left face to end of cylindrical section: 1.5
- Distance from left face to end of cylindrical section: 5.1
- Distance from left face to end of cylindrical section: 6.5
- Distance from left face to end of cylindrical section: C0.5

- (1) Base(Gate)
- (2) Collector(Drain)
- (3) Emitter(Source)

- (1) Emitter
- (2) Collector
- (3) Base

Type	2SB1183	2SB1239
Package	CPT3	ATV
h_{FE}	1k~200k	1k~
Code	TL	T146
Basic ordering unit (pieces)	2500	2500

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage		BV _{CBO}	-40	-	-	V	I _C =-50μA
Collector-emitter breakdown voltage		BV _{CER}	-40	-	-	V	I _C =-1mA, R _{BE} =10kΩ
Emitter-base breakdown voltage		BV _{EBO}	-5	-	-	V	I _E =-50μA
Collector cutoff current		I _{CBO}	-	-	-1	μA	V _{CB} =-24V
Emitter cutoff current		I _{EBO}	-	-	-1	μA	V _{CB} =-4V
Collector-emitter saturation voltage		V _{CE(sat)}	-	-	-1.5	V	I _C /I _B =-0.6A/-1.2mA
DC current transfer ratio	2SB1183	h _{FE}	1000	-	20000	-	V _{CE} /I _C =-2V/-0.5A
	2SB1239		1000	-	-	-	
Output capacitance		C _{ob}	-	11	-	pF	V _{CB} =-10V, I _E =0A, f=1MHz